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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/034,571	12/27/2001	Harold R. Blomquist	TRW(VSSIM)5598	1546

26294 7590 09/23/2003

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EXAMINER

MILLER, EDWARD A

ART UNIT	PAPER NUMBER
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3641

DATE MAILED: 09/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/034,571

Applicant(s)

BLOMQUIST ET AL.

Examiner

Edward A. Miller

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15, 17-29 and 31-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15, 17-29 and 31-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

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1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 1-15, 17-29 and 31-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor et al. '147, in view of Lundstrom et al., Mendenhall et al., and Ryobo et al.

Taylor et al. '147 teach gas generator compositions, at col. 3, line 50, suggests basic copper nitrate, and various binders in the paragraph bridging col. 4-5, as well as the following paragraph. Variation of notoriously well known individual ingredients and amounts would have been obvious to one of ordinary skill in the art. It is well settled that optimizing a result effective variable is well within the expected ability of a person of ordinary skill in the subject art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980), *In re Aller*, 220 F.2d 454, 105 USPQ 233 (CCPA 1955).

In particular, the secondary references further suggest such, e.g., in the Lundstrom et al., Abstract, in Mendenhall especially at col. 3, lines 35-45, and in Ryobo et al., col. 5, lines 39-46 and col. 6, lines 21-43. Ordinary variation of such parameters would have been obvious, absent unexpected results. The recited volume % limitation for the binder, however, would not be unexpected. With heavy or dense oxidizers (and other ingredients) such as metal oxides and copper compounds, these would provide a small volume amount due to their density, so the binder would have a relatively large volume proportion.

Applicants urge, in reply to the above, that there is no teaching that the volume per cent of binder should be at least 20%. Where there is no teaching of any volume percent of the binder in the references, do applicants urge that the binder specifically taught thus has no volume? Such would be a most peculiar position, against all rational science and engineering. Next, let us consider the teachings about the binder in the references, compared to the claims. Claim 1, for example, recites 5-20 weight percent of a binder. Taylor et al. '147, at col. 3, lines 15-17, teach 2-15% of

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binder. In other words, the overlap of weight percent is from 5% to 15%. Further, in claim 1, there is no limitation on the identity of the binder. Looking further to claims with limitations of the binder, in claim 9 it may be thermosetting, while in claim 11 it may be thermoplastic. In claim 12, it may be cellulose acetate butyrate. Looking at Taylor et al. '147, at col. 3, lines 37-39, one finds that the binder may be cellulose acetate butyrate. How it is that 10% of cellulose acetate butyrate binder in the claims, compared to 10% of cellulose acetate binder in Taylor et al. '147, will have any difference in the volume actually occupied?

That the reference does not mention any volume parameter clearly does not change physical reality in the real world; identical things have identical properties. Applicants' arguments do not even address the critical factor asserted in Paper No. 5, that with heavy, dense oxidizers, the composition will inherently have a larger volume amount. Failure to address this argument in reply to this action will result in admission of its validity. There is no suggestion by the Office, contrary to the applicants' incorrect assertion in lines 15-19 of page 10 of the reply, for volume optimization of the binder. Instead, the ordinary artisan would optimize for the chemical and engineering properties to obtain the correct energy, burning speeds, low toxicity, extrudability, and so on, by optimization of appropriate amounts and composition. There is not even any proof that any specific binder taught effective in Taylor et al. '147 will lack the claimed volume percent. If there is any such, then the claims are internally contradictory, since they allow as little as 5% by weight binder, without any recited limitation on the identity of the binder. Looking to the specification, page 26, lines 4-12 teach that the volume percent is about 20% or more to allow for extrusion, line 6. Taylor et al. '147, at col. 2, lines 64-66, teach extrusion of the gas generating material. It is respectfully submitted that what is good for the goose is good for the gander. Optimization as suggested by the Office, is not based on words being optimized to avoid the words used in the prior art, instead it is based on real

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properties as known by those of ordinary skill in the art being optimized to obtain the real world desired results.

3. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

4. Any inquiry concerning either this or an earlier communication from the Examiner should be directed to Examiner Edward A. Miller at (703) 306-4163. Examiner Miller may normally be reached Monday-Thursday, from 10 AM to 7 PM.

If attempts to reach Examiner Miller by telephone are unsuccessful, his supervisor Mr. Carone can be reached at (703) 306-4198. The Group fax number is (703) 305-7687.

If there is no answer, or for any inquiry of a general nature or relating to the application status, please call the Group receptionist at (703) 308-1113.

Miller/em
September 22, 2003



**EDWARD A. MILLER
PRIMARY EXAMINER**